

Appendix A: Economic Development and Culture Trends in Toronto – Data Analysis

Introduction

The proposed lenses presented in the EDC Divisional Strategy Conversation Guide are based in part on a data review. Key data variables, when tracked over time, indicate some clear trends that a new EDC strategy can respond to.

At a glance, the Toronto region economy has done well since the global financial crisis of 2008. Regional population and GDP growth are significantly outpacing the national average. Employment in Toronto is growing steadily and new development, driven by strong demand for space, is very visible in some parts of the city. The region continues to attract immigrants from all over the world and its economic success is based in large part on a diverse and highly educated labour force. Arts and culture related data similarly show some positive trends. Toronto is home to the largest concentration of artists in Canada and the city's economy is specialized relative to Canada in information and cultural industries. Cultural events attract millions of visitors each year.

However, other data trends are worrisome. For example, part-time jobs are being added at a much faster rate than full-time jobs. Median wages have not kept pace with overall growth and income inequality is worsening, both between households and neighbourhoods. While the cultural economy grows, many artists are impacted by low incomes and a lack of affordable space.

The EDC Division tracks a variety of indicators and publishes several data products including a monthly Toronto Economic Bulletin. This appendix presents time series for selected indicators that have helped inform some possible directions for a new EDC Divisional Strategy. The following sections are included:

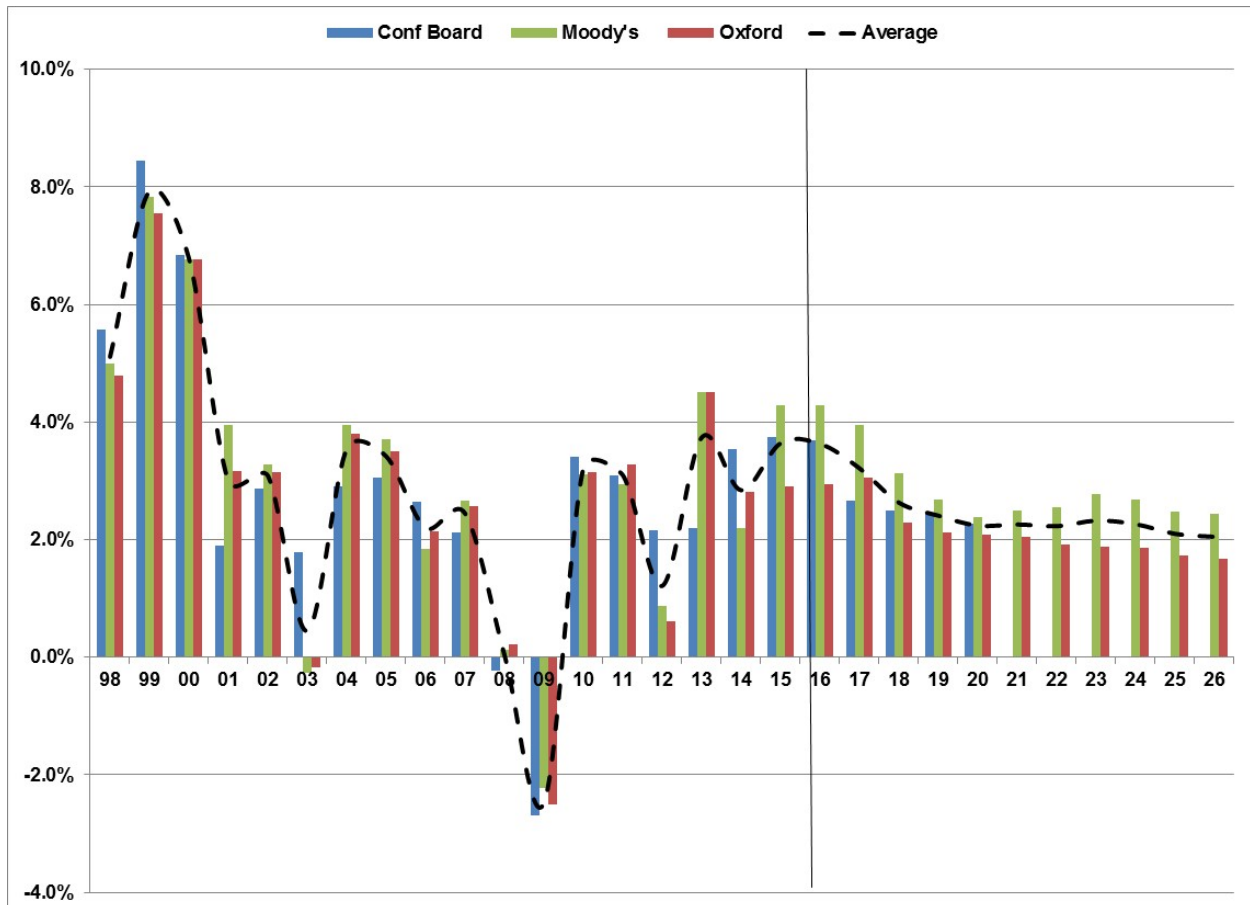
- Regional GDP
- Population Growth
- Labour Force (Employment Growth; Unemployment Rates; Full-time and Part-time Employment; Place of Work; Self-Employment; Temporary Employment; Employment by Period of Immigration; Unionization Rates; Educational Attainment; Wages)
- Industrial Mix
- Arts and Culture
- Industrial, Commercial and Residential Development

Finally, this appendix ends with a discussion of key indicators related to each of the four proposed lenses in the EDC Strategy Conversation Guide, and what could be tracked moving forward if the application of these lenses leads to specific actions.

Regional GDP

Taken as a whole, the Toronto region economy has been growing steadily. Toronto region GDP grew by approximately 3.5% in 2016 and is forecast to grow by 2.9% in 2017 and 2.4% in 2018, outpacing forecast growth for Canada overall.

Annual Real GDP Growth Rates for Toronto CMA – Measured and Forecast 1998-2026

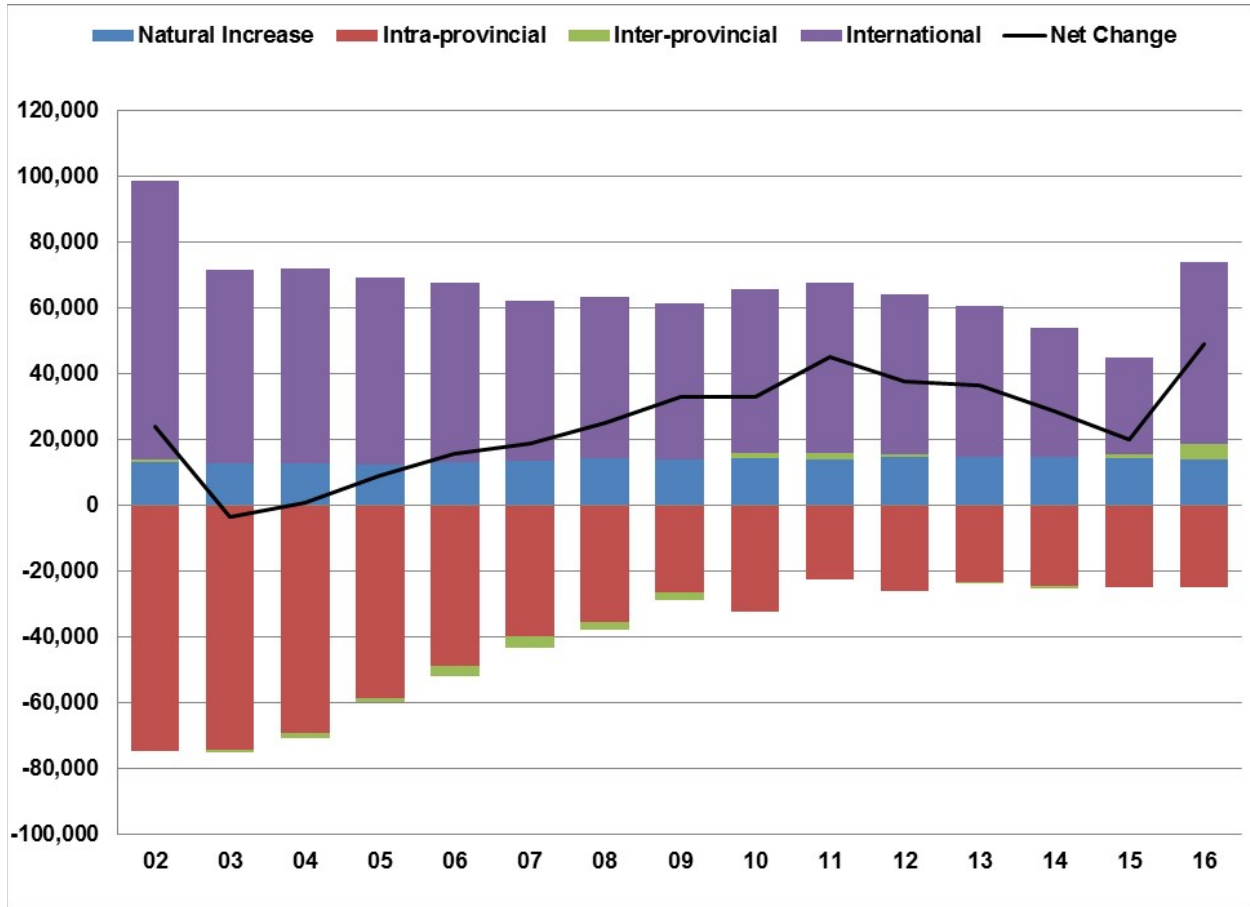


Source: Conference Board of Canada (June 7, 2017), Moody's Analytics (May 18, 2017), Oxford Economics (April 3, 2017)

Population Growth

Toronto's population has risen in every year since 2003, and now sits at nearly 2.9 million. Population growth in the city continues to be driven by international immigration. However, intra-provincial is negative as more people leave Toronto for other parts of the province than vice versa. In 2016, net out-migration to the rest of Ontario was 25,000, which is significantly less than in 2002 when net intra-provincial outmigration was 75,000.

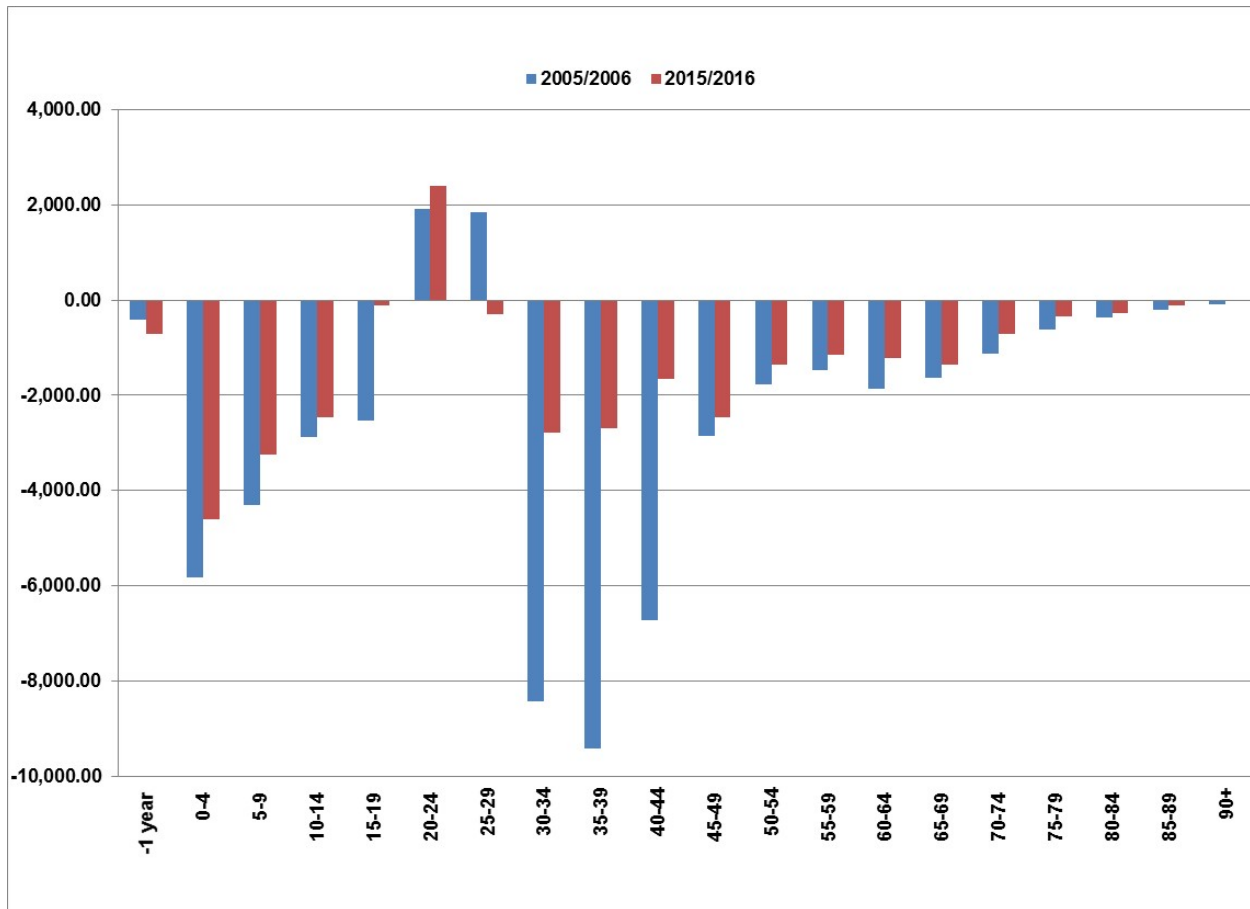
Population Change by Component – City of Toronto 2002-2016



Source: Statistics Canada, CANSIM Tables 051-0063 and 051-0064

Negative out-migration to the rest of Ontario is likely related to the cost of living in Toronto. From the graph below, people in their early twenties are more likely to move in to Toronto from other parts of Ontario than out. However, the age data graph also suggests that the majority of those leaving for other parts of Ontario are 30-44 year olds and their children.

Intra-provincial Migration by Age Cohort – City of Toronto



Source: Statistics Canada Population Estimates, CANSIM Tables

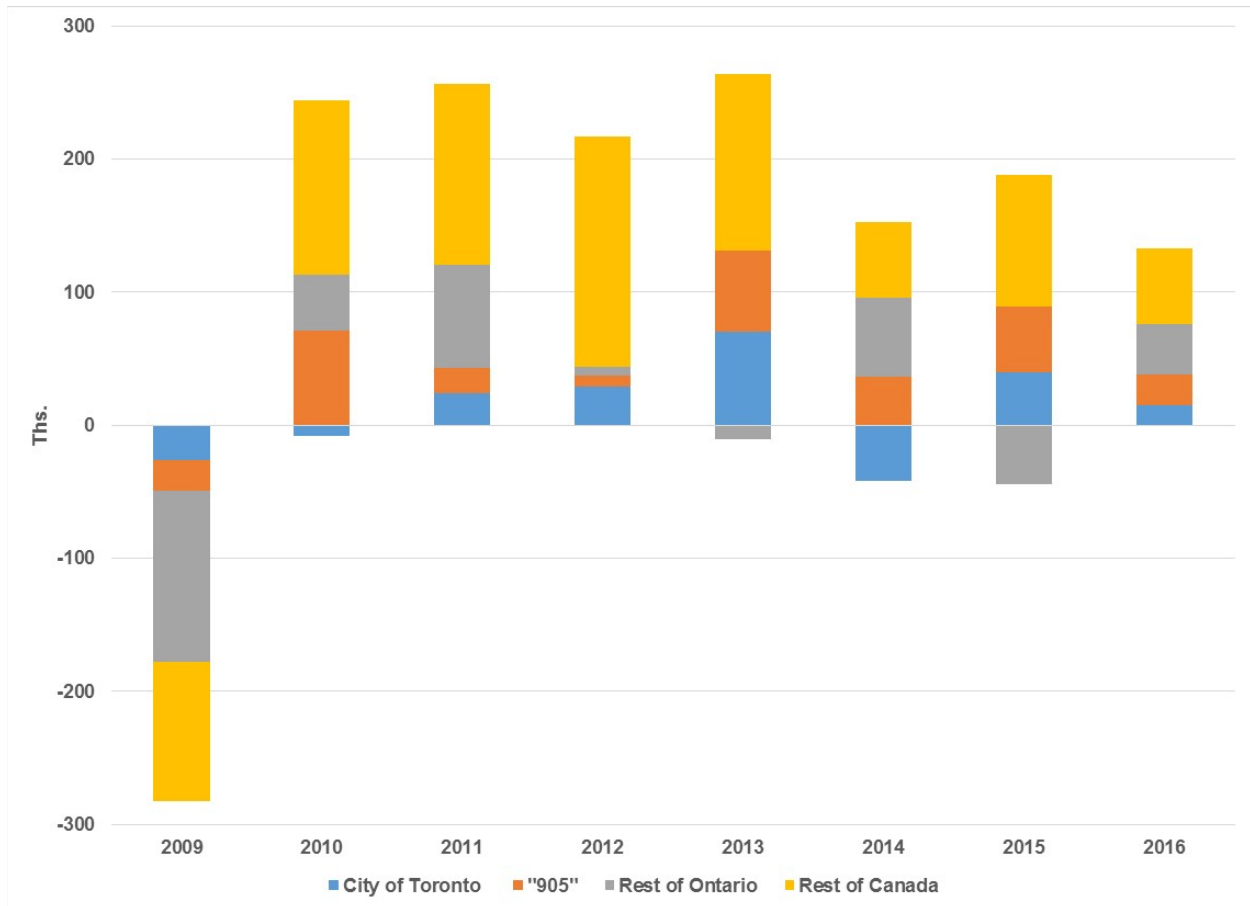
Labour Force

The following sub-sections explain some characteristics of the Toronto region labour force and labour market.

Employment Growth

The chart below shows the annual change in the number of employed residents from 2008 to 2016 in Toronto, the surrounding municipalities, the rest of Ontario and the rest of Canada. Since 2008, the number of employed Canadians has increased by 6.3%. Over the same period, the number of employed Ontarians increased by 5.9% but this growth was not evenly distributed across the province. Employment grew by 7.5% among Toronto residents and by 16.3% among residents of the rest of the CMA (the "905"). In contrast, the number of employed residents in the rest of Ontario increased by only 1.1%.

Annual Change in Employed Residents 2008-2016

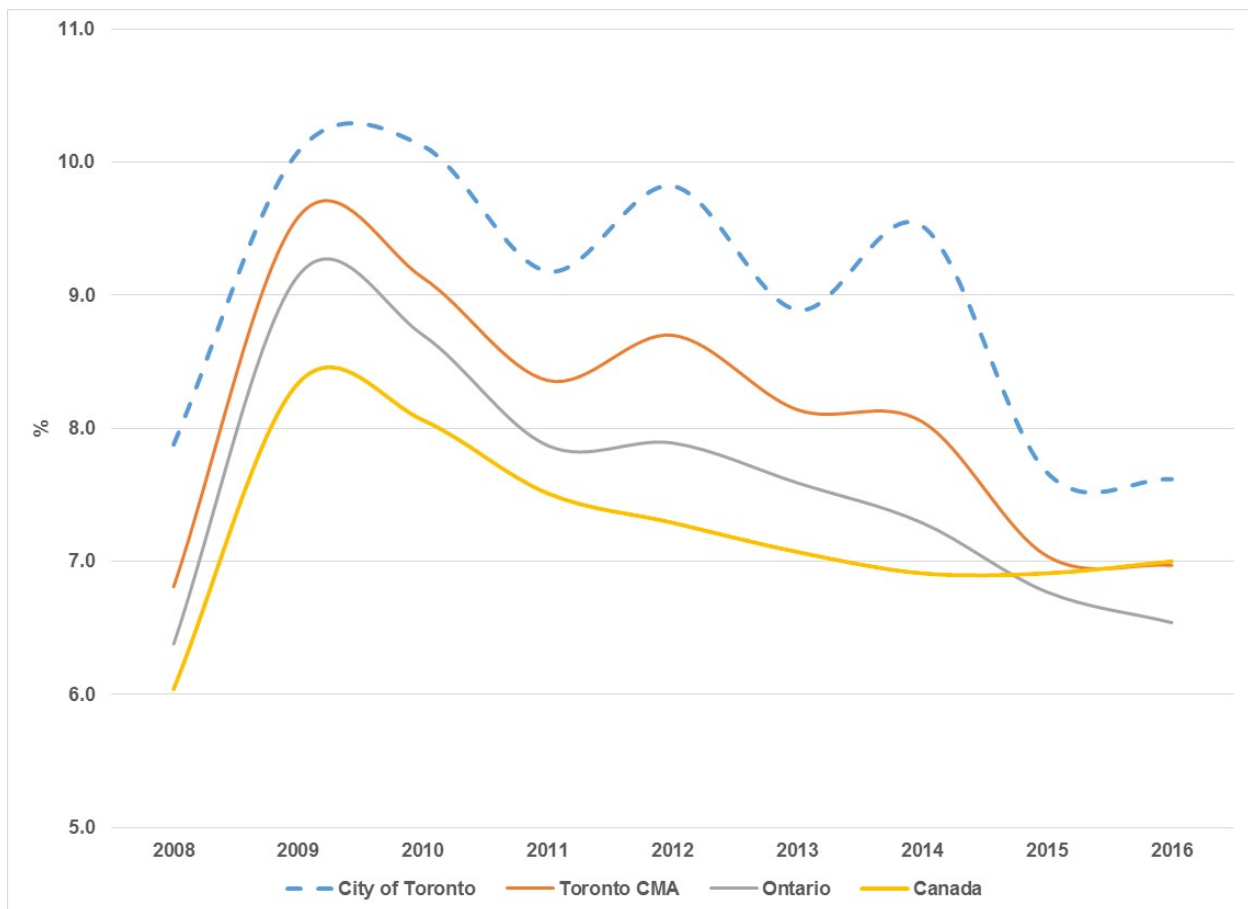


Source: Statistics Canada, Labour Force Survey

Unemployment Rates

With a labour force participation rate hovering around 65%, the city's unemployment rate was measured at 7.62% in 2016, essentially equal to what it was in 2008 before the global financial crisis (7.56%), and only moderately higher than the CMA overall (6.97%), Ontario (6.54%) and Canada (7.00%). This comparison is significant because Toronto is a primary destination for students and newcomers meaning that it is more likely to have higher measured unemployment in any given month.

Unemployment Rate Comparison



Source: Statistics Canada, Labour Force Survey

Full-Time and Part-Time Employment

The number of **full-time** employed city residents has increased by 6.4% (+71,200) since 2008. As shown in the table below, growth in full-time employment was impacted negatively by declines in the goods-producing sector (-12.1% or -28,100). Full-time employment in the services-producing sector grew by 11.2% (+99,300). All full-time employment growth (+49.7% or +80,770) was accounted for by city residents aged 55 and older as this age cohort grew significantly. Full-time employment for residents aged 15-24 saw a large decline of 11.3% (-9,430).

From 2008-2016, **part-time** jobs increased by 12.8%, or twice as fast as full-time jobs, and half of all net new part-time jobs were involuntary part-time. Part-time employment is defined as working less than 30 hours/week at a main or only job. Part-time employed city residents account for almost one-fifth (17.6% in 2016) of total employed residents. Part-time gains were spread across both services (+12.4%) and goods (+23.3%) producing sectors, with the largest increase in arts, entertainment and recreation (+82.1%) and health care and social assistance (+53.0%). city residents aged 55 and older also accounted for most of the part-time employment increase (+17,080 or

+39.2%). Slightly fewer Toronto residents aged 15-24 were working part-time in 2016 than in 2008 (-1.8%).

Full and Part-Time Employed City Residents by Industry, 2008-2016

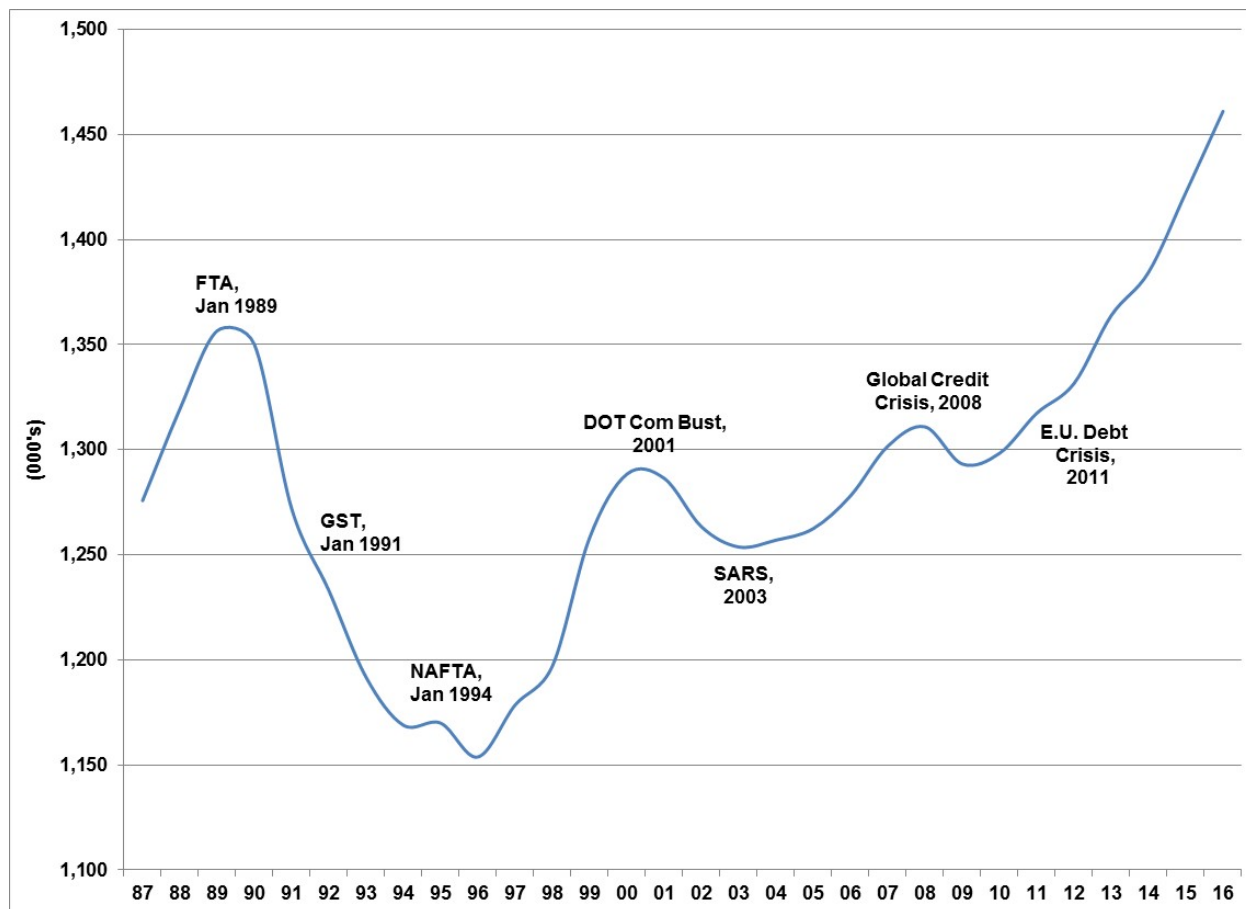
	Total		Full Time		Part Time	
	Change (x1,000)	Change %	Change (x1,000)	Change %	Change (x1,000)	Change %
	08-16	08-16	08-16	08-16	08-16	08-16
All Industries	103.6	7.7%	74.1	6.6%	29.6	13.1%
Good-Producing Sector	-25.5	-10.5%	-27.6	-11.9%	2.1	23.6%
Agriculture, Forestry, Fishing and Hunting	-1.9					
Mining and Oil and Gas Extraction	0.6	34.2%	0.5	30.1%		
Utilities	-3.5	-40.3%	-3.5	-40.3%		
Construction	13.2	18.5%	11.8	17.3%	1.4	46.3%
Manufacturing	-35.3	-22.3%	-36.2	-23.7%	0.9	16.3%
Services-Producing Sector	129.1	11.7%	101.7	11.5%	27.4	12.7%
Wholesale Trade	7.3	15.0%	8.9	19.9%	-1.6	-38.6%
Retail Trade	6.7	5.2%	6.1	7.3%	0.5	1.2%
Transportation and Warehousing	-6.3	-11.4%	-5.7	-12.2%	-0.5	-6.7%
Information and Cultural Industries	-7.0	-12.9%	-6.8	-14.1%	-0.2	-3.3%
Finance and Insurance	17.8	15.3%	18.6	16.8%	-0.8	-14.4%
Real Estate and Rental and Leasing	10.4	32.7%	10.0	38.7%	0.4	7.1%
Professional, Scientific and Technical Services	26.8	18.0%	25.9	19.8%	0.9	5.0%
Management of Companies and Enterprises	-1.6					
Administrative and Support, Waste Management and Remediation Services	3.1	4.3%	5.7	10.5%	-2.7	-16.2%
Educational Services	11.3	12.5%	7.1	10.9%	4.2	16.7%
Health Care and Social Assistance	37.4	29.4%	23.7	23.3%	13.7	53.4%
Arts, Entertainment and Recreation	13.1	44.0%	4.0	21.2%	9.2	82.5%
Accommodation and Food Services	11.6	13.2%	6.3	10.8%	5.3	18.0%
Other Services (except Public Administration)	1.9	3.0%	1.7	3.4%	0.2	1.2%
Public Administration	-3.8	-8.1%	-3.0	-7.0%	-0.8	-19.3%

Source: Statistics Canada, Labour Force Survey

Place of Work

As the number of employed city and "905" residents is increasing, many of them are working in new or expanded Toronto establishments. Based on the 2016 Toronto Employment Survey, there are approximately 1.46 million people working at Toronto establishments. The annual survey shows that employment has been growing steadily since 2009 when it was approximately 1.29 million.

Employment at Toronto Establishments 1987-2016



Source: City of Toronto, Toronto Employment Survey

Self-Employment

Employment at Toronto establishments does not include city residents who are **self-employed**. The number of self-employed residents increased by 24,070 between 2008 and 2016. All of this increase was accounted for by people without employees. The number of self-employed city residents with paid help actually declined. In April 2017 the percentage of the Toronto labour force in self-employment stood at 18.9%, the highest level in at least 30 years.

Temporary Employment

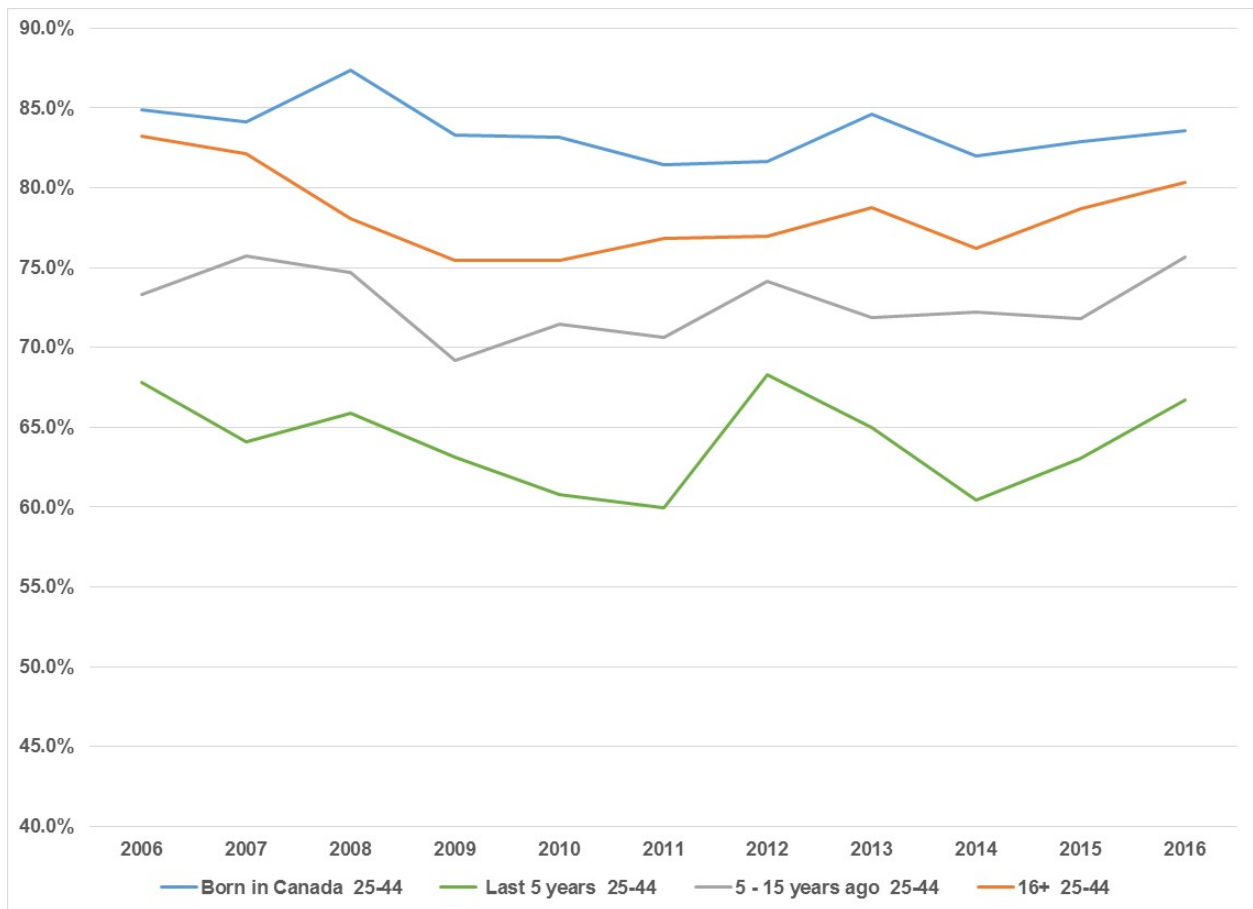
Data indicates that many Toronto residents struggle to secure stable and well-paid employment. A recent study by the United Way entitled *It's More than Poverty* (2013) documented the rise of precarious employment situations and found that only 60% of GTA workers have stable, secure jobs. City of Toronto residents with temporary jobs (+33.4%) increased ten times faster than residents with permanent jobs (+3.2%) over the period of 2008-2016. Even in absolute terms the number of city residents with

temporary jobs increased by more than residents with permanent jobs. Temporary employment has a predetermined end date, or will end as soon as a specified project is completed.

Employment by Period of Immigration

The likelihood of being employed among Toronto residents varies by period of immigration. After adjusting for age, newly landed immigrants typically have lower employment rates than Canadian born residents and less recent immigrants. The chart below shows that for 25-44 year-olds the employment rate (the percentage of the labour force that is employed) increases with the amount of time in Canada, but even those who have been in Canada for over 15 years are less likely to be employed than Canadian born residents.

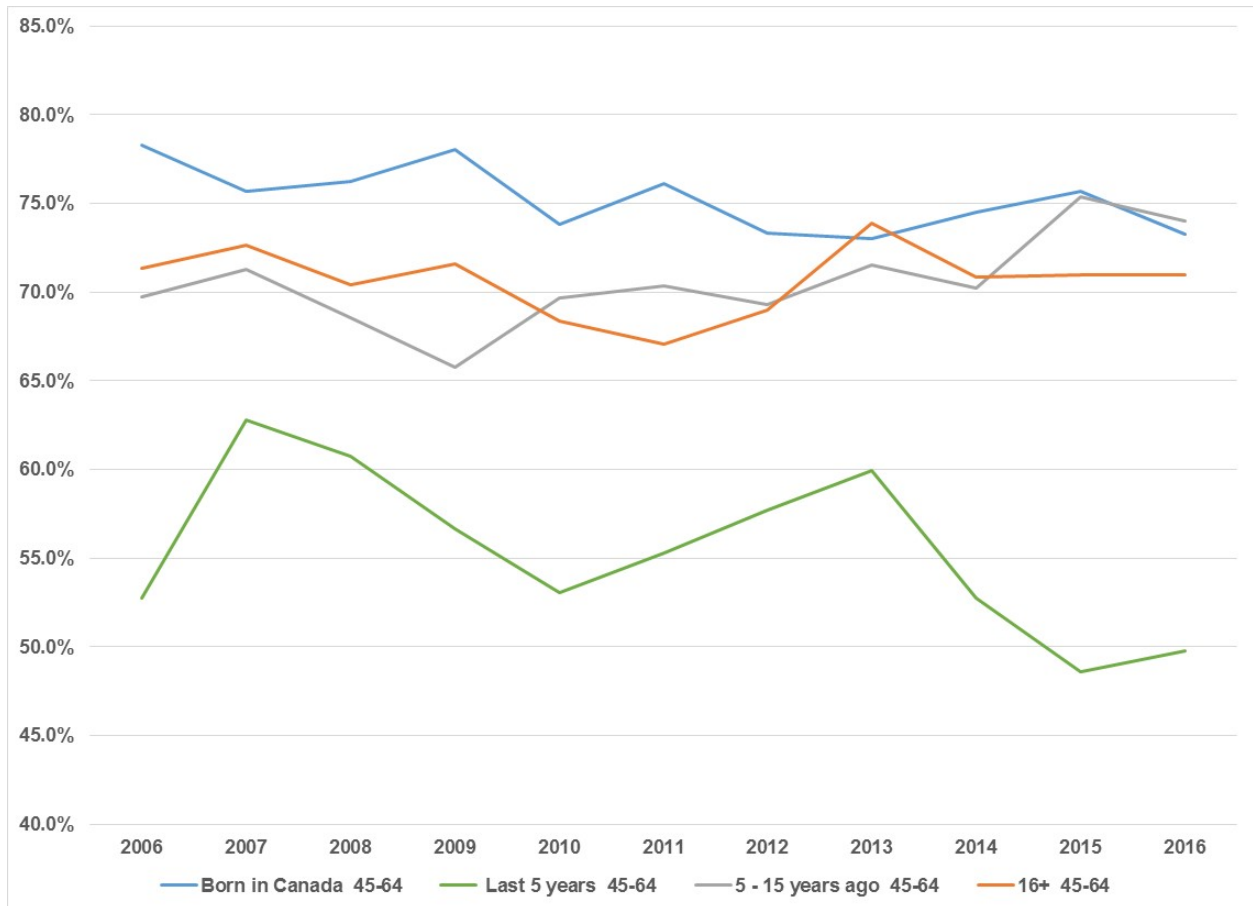
Employment Rates by Period of Immigration for 25-44 Year-old Toronto Residents



Source: Statistics Canada, Labour Force Survey

When comparing 45-64 year-olds, there is less of a difference in employment rates between more established immigrants and Canadian born residents. However, recent immigrants are significantly less likely to be employed, with employment rates dipping below 50% in the last two years.

Employment Rates by Period of Immigration for 45-64 Year-old Toronto Residents



Source: Statistics Canada, Labour Force Survey

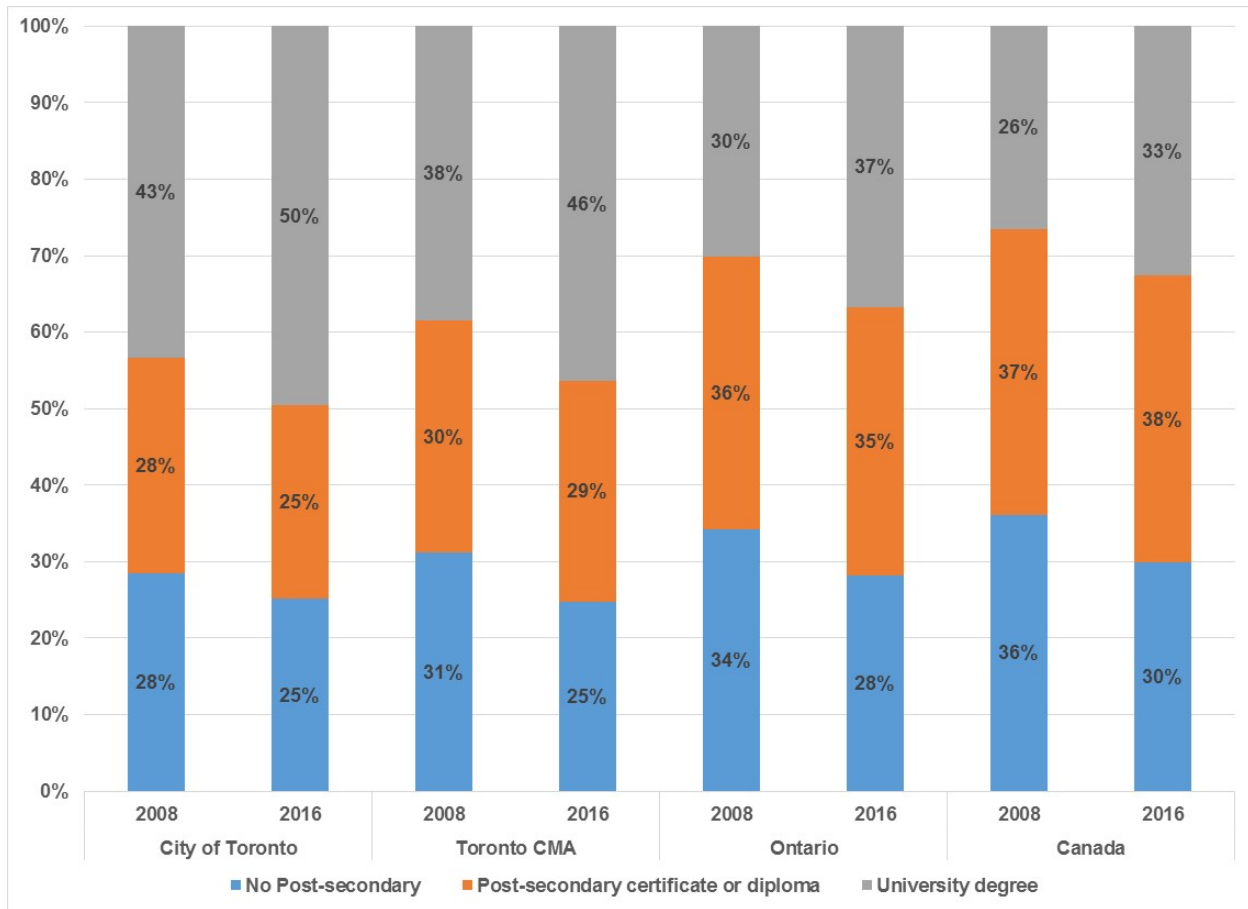
Unionization Rates

The number of city of Toronto residents with unionized jobs (+12,770) grew less quickly than those with non-union jobs (+63,320). Of the net new unionized jobs that were created, almost all (+11,060) were part-time positions.

Educational Attainment

Overall, the Toronto labour force is highly educated. In 2016 a full 50 percent of Toronto residents between the ages of 25 and 64 had a university degree and another 25.3 percent held a different post-secondary diploma or certificate. This is significantly higher than in 2008 when 43 percent held a university degree and 28 percent held a diploma or certificate. It's also a much different pattern than 25-64 year olds in Ontario overall (37% university degree and 35% diploma or certificate), and in Canada (33% university degree and 38% diploma or certificate).

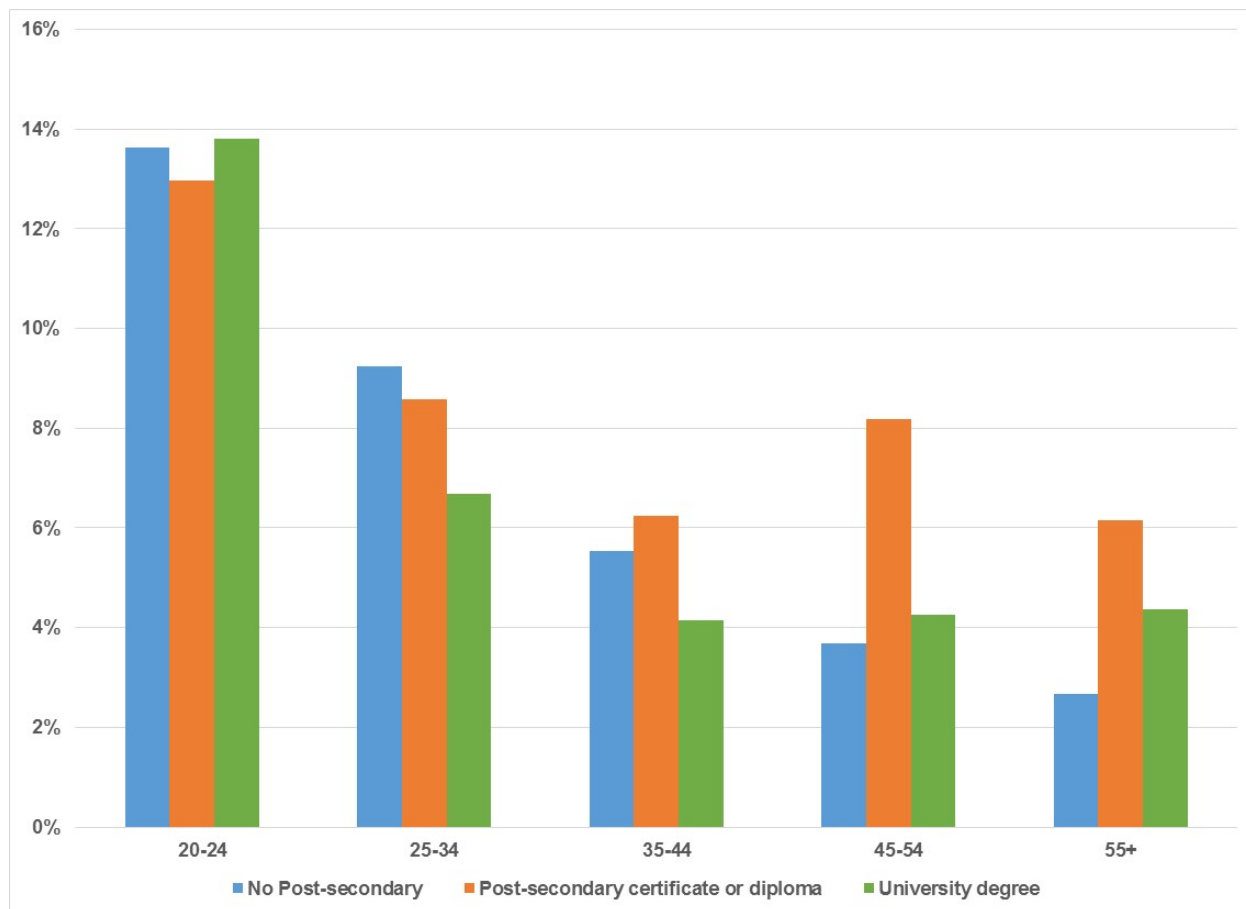
Educational Attainment



Source: Statistics Canada, Labour Force Survey

Employment rates vary by educational attainment. However, the chart below shows that attainment is not as strong a predictor of employment as might have been expected, particularly among older age cohorts. The chart shows the highest unemployment rates among Toronto residents in the 20-24 age cohort with little variation based on education. In the 25-34 and 35-44 cohorts, university degree holders are less likely to be unemployed. In the oldest age cohorts, university degree holders and especially post-secondary diploma or certificate holders have a higher unemployment rate than those with no post-secondary credentials. Since older cohorts have less education as a whole than younger cohorts, as older workers retire, overall levels of education rise, and higher returns to education can be expected across more age cohorts.

Unemployment Rates by Age and Educational Attainment

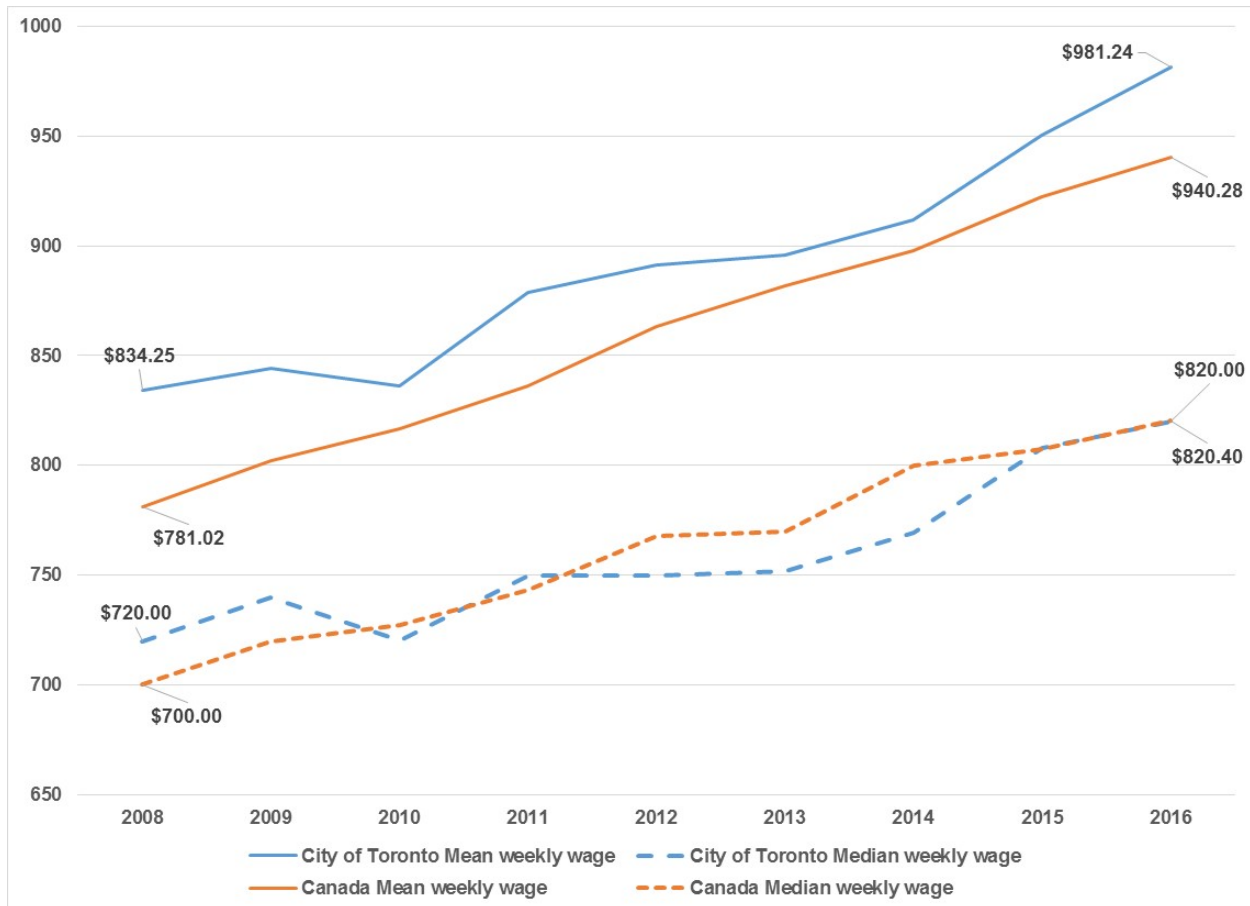


Source: Statistics Canada, Labour Force Survey

Wages

Average weekly wages of Toronto residents have grown in nominal terms since 2008. However, a trend towards greater income inequality is reflected in the rising ratio of mean to median weekly wages over time; while wages at the high end are climbing and bringing up the mean, median wages are flatter.

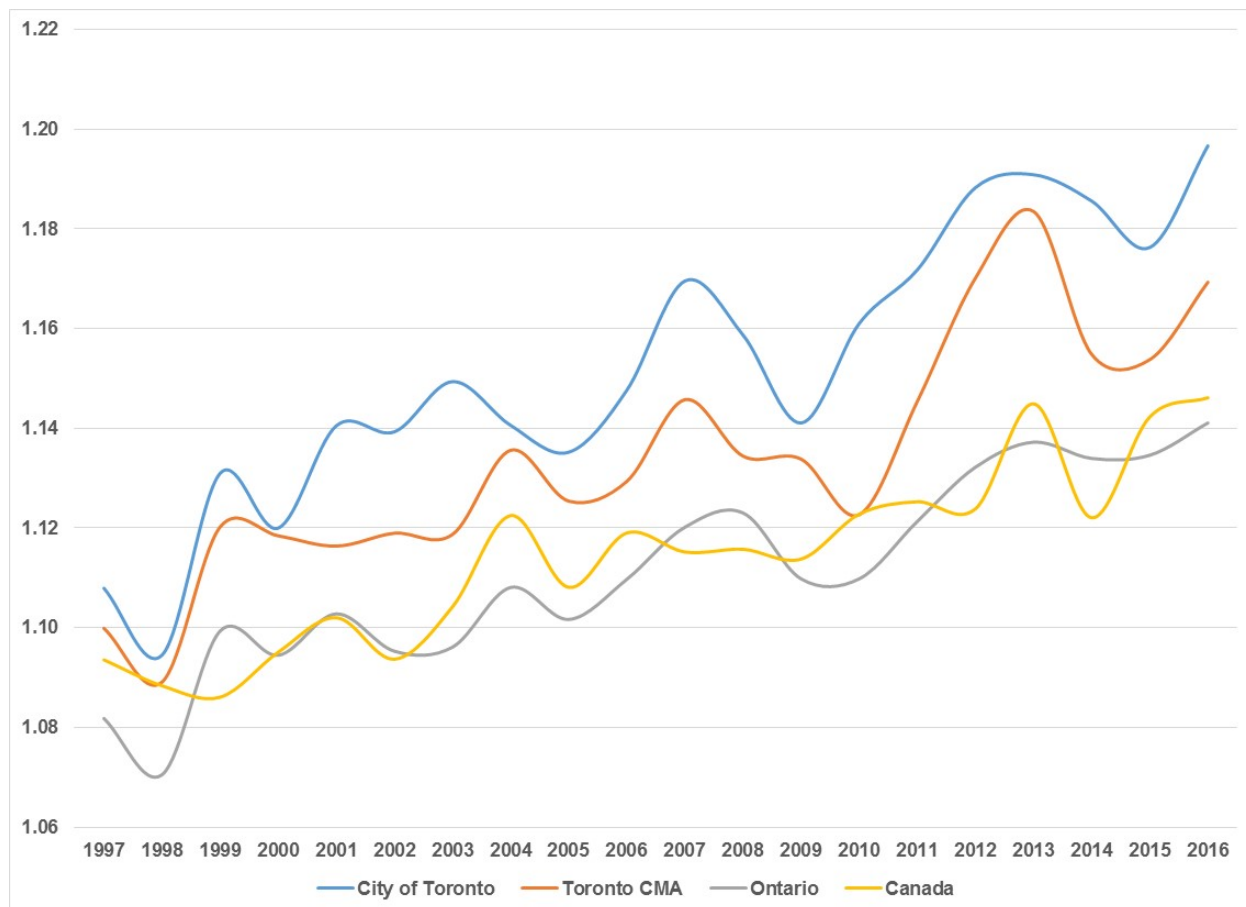
Mean and Median Wages



Source: Statistics Canada, Labour Force Survey

While this is true across Canada, the graph below shows it is particularly pronounced in Toronto. The mean (average) hourly wage for Toronto residents increased between 2008 and 2016 by 19.2%, while the median wage increased by only 15.8%, the same as the change in the Consumer Price Index measure of inflation. Mean and median wages are usual wages or salaries of employees at their main job.

Ratio of Mean to Median Weekly Wages



Source: Statistics Canada, Labour Force Survey

Industrial Mix

Based on the most recent data from the 2011 census, shown in the chart below, employment in Toronto can be said to be specialized in several industries that most other peer cities and regions are trying to attract and grow. Toronto registers the highest location quotients, a measure of a sector's share of the local economy as compared to its share of the national economy, in finance and insurance; professional, scientific and technical services; and information and cultural industries. This last category includes many of the city's artists, writers and musicians, along with its film and television industry.

While significantly smaller than it used to be, and much more concentrated in the 905, a stabilized manufacturing sector still employs nearly ten percent of the Toronto workforce and produces a wide variety of innovative products. Despite being the seat of the provincial government, relative to the national average a smaller share of Toronto employment is in the fields of Education, Health Care and Public Administration.

Location Quotients by Place of Work (2011)

	City of Toronto	"905"	Toronto CMA	Rest of Ontario	Ontario
11 Agriculture, forestry, fishing and hunting	0.04	0.24	0.13	1.11	0.66
21 Mining, quarrying, oil and gas extraction	0.17	0.08	0.13	0.51	0.33
22 Utilities	0.76	1.02	0.88	1.10	1.00
23 Construction	0.63	1.01	0.81	0.97	0.89
31-33 Manufacturing	0.76	1.49	1.11	1.16	1.13
41 Wholesale trade	0.88	2.04	1.43	0.81	1.10
44-45 Retail trade	0.76	1.04	0.89	1.02	0.96
48-49 Transportation and warehousing	0.73	1.61	1.14	0.85	0.99
51 Information and cultural industries	2.05	1.04	1.57	0.73	1.12
52 Finance and insurance	2.45	1.04	1.79	0.77	1.24
53 Real estate and rental and leasing	1.43	1.20	1.32	0.91	1.10
54 Professional, scientific & technical services	1.60	1.19	1.41	0.79	1.08
55 Management of companies and enterprises	1.48	1.34	1.41	0.62	0.99
56 Administrative and support, waste mgmt	1.22	1.24	1.23	1.03	1.12
61 Educational services	0.95	0.82	0.89	1.07	0.99
62 Health care and social assistance	0.90	0.62	0.77	1.06	0.92
71 Arts, entertainment and recreation	0.99	0.79	0.90	1.18	1.05
72 Accommodation and food services	0.86	0.81	0.84	1.05	0.95
81 Other services (except public admin)	1.04	0.87	0.96	0.95	0.95
91 Public administration	0.81	0.48	0.65	1.23	0.96

Source: Statistics Canada, 2011 National Household Survey

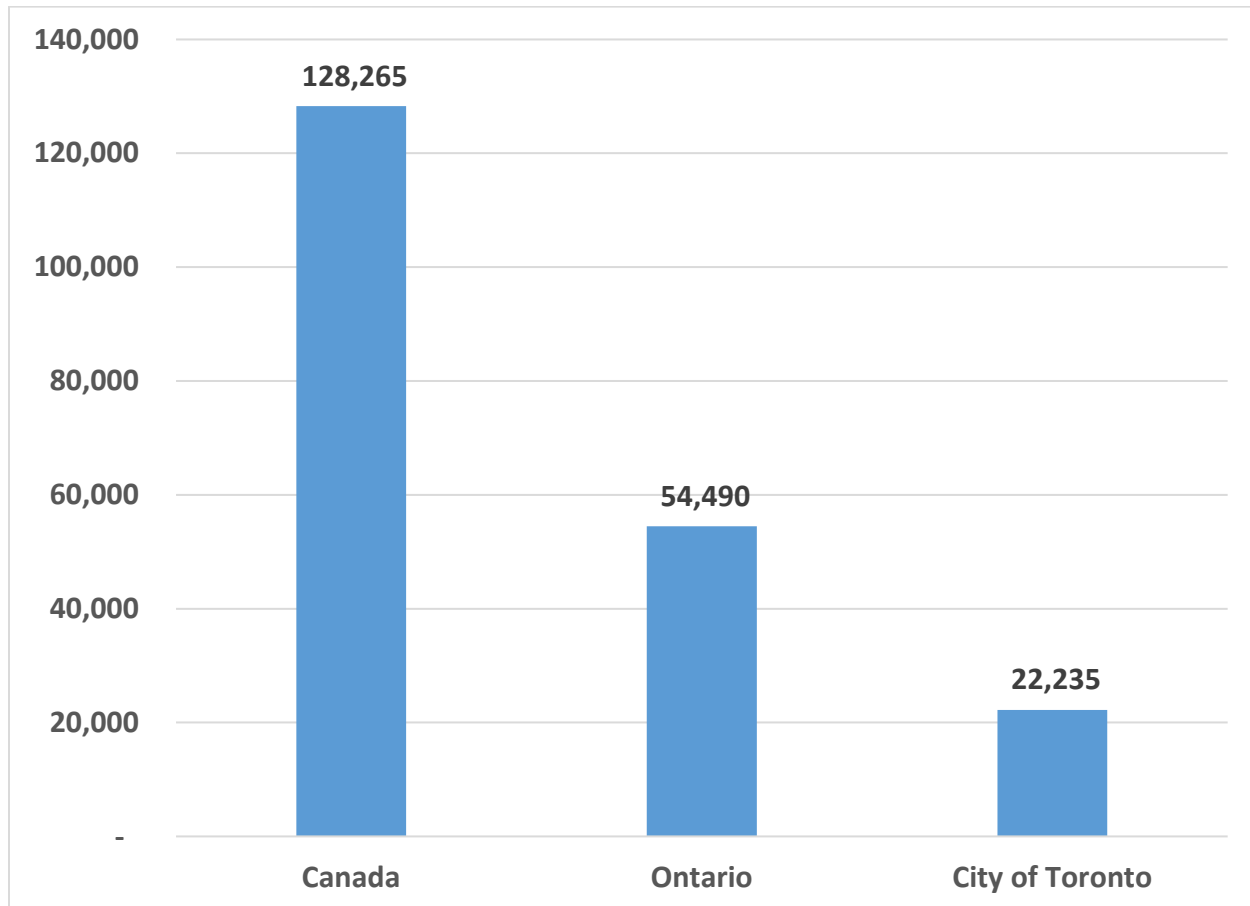
Arts and Culture

According to the 2011 National Household Survey, there were more than 22,000 employed residents in the city of Toronto who worked in an arts occupation¹. This represents more than 17% of all employed Canadians in the same occupation categories, while Toronto has only 8% of the national population.

[The Statistical Profile of Artists and Culture Workers in Canada report](#), based on the 2011 National Household Survey (Hill Strategies Research, 2014), indicates that Toronto is home to 93% more artists than any other Canadian city. The report also shows that one in every 26 Canadian workers has a cultural occupation.

¹ Includes National Occupation Classification for Statistics (NOCS) codes 5121 Authors and Writers, 5131 Producers, Directors, Choreographers and Related Occupations, 5132 Conductors, Composers and Arrangers, 5133 Musicians and Singers, 5134 Dancers, 5135 Actors and Comedians, 5136 Painters, Sculptors and Other Visual Artists, 5232 Other Performers, 5244 Artisans and Craftspersons.

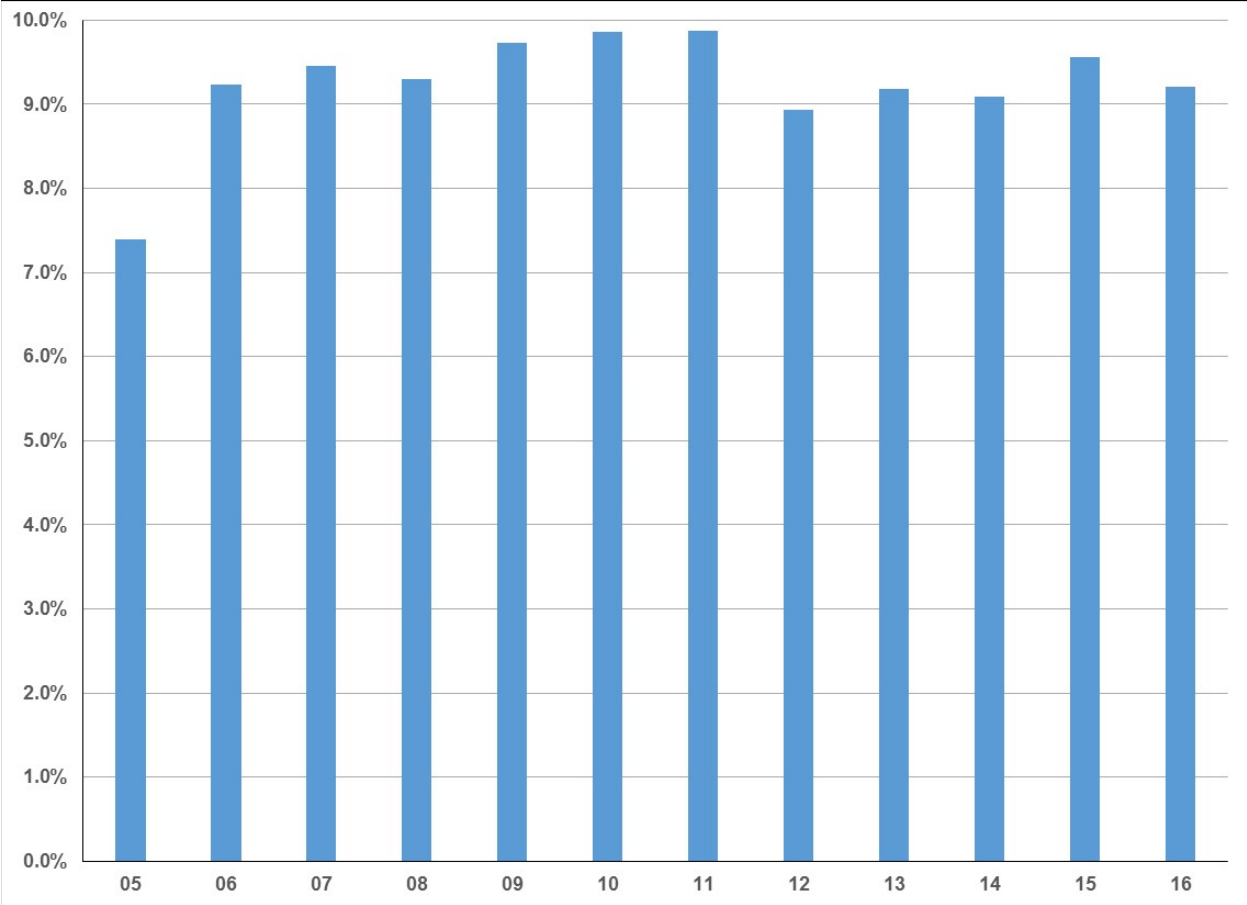
Employed Residents in Arts Occupations, 2011



Source: Statistics Canada, 2011 National Household Survey data by Place of Residence

Jobs in the culture sector continue to account for approximately ten percent of all jobs in the city of Toronto. In 2016, there were more than 164,000 culture jobs in Toronto, accounting for 90% of all culture jobs in the Toronto region and over half of total cultural employment in Ontario. The largest cultural sectors in the city of Toronto include: publishing (10,440 jobs), motion picture and video (17,150 jobs), broadcasting (10,180 jobs), specialized design services (15,830), advertising and related services (24,980) and independent artists, writers and performers (10,260).

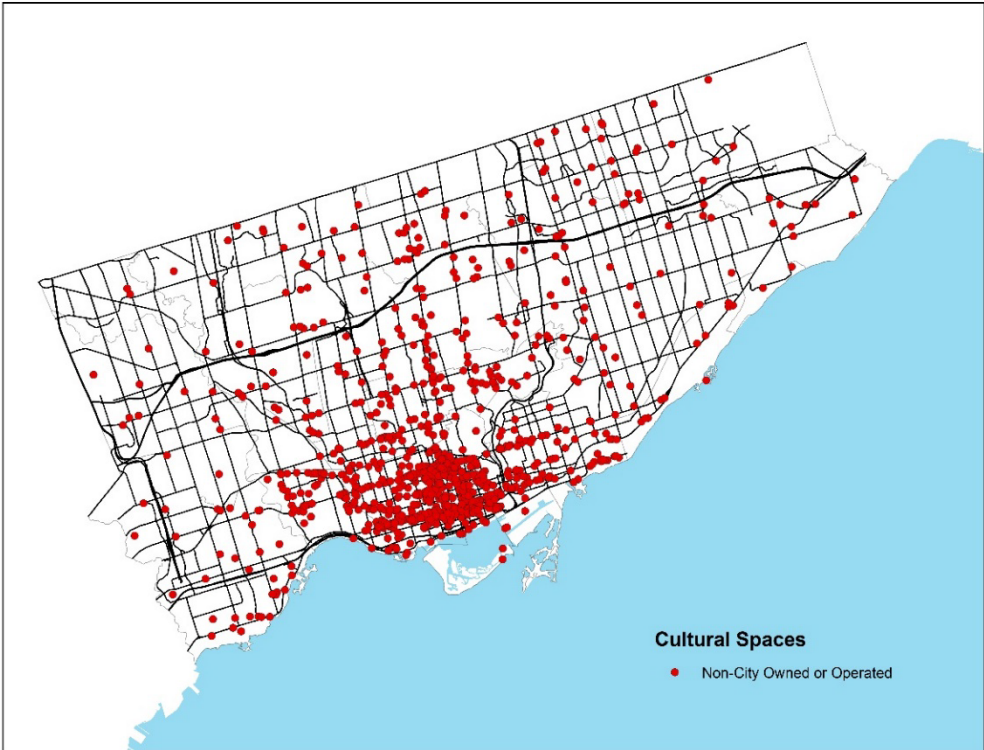
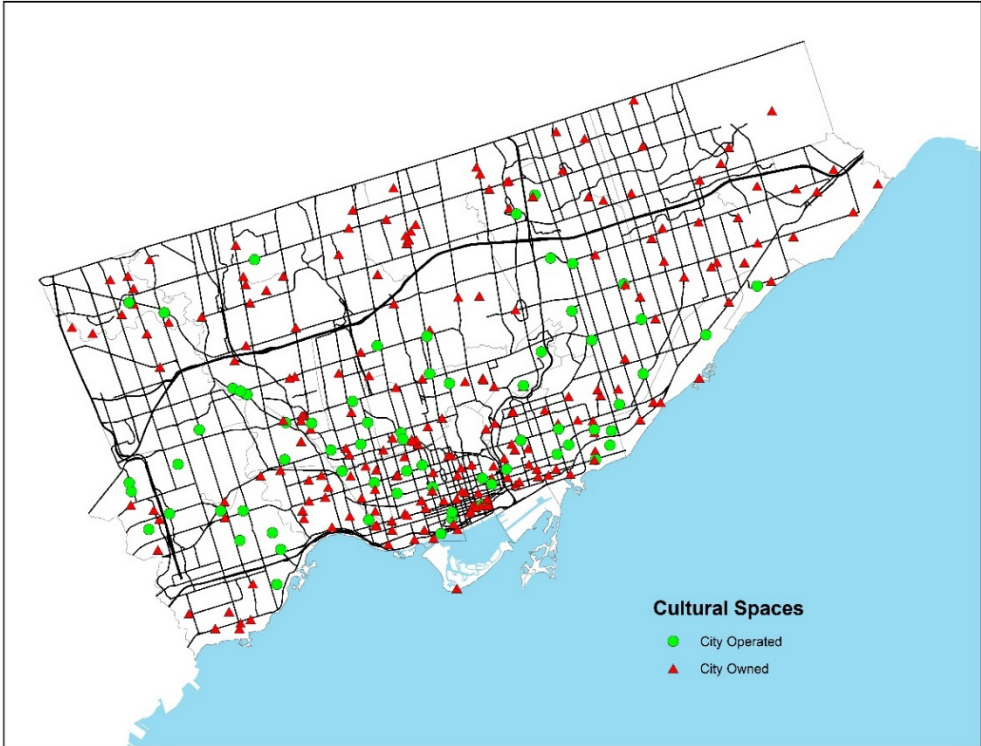
Culture Sector Jobs in the City of Toronto



Source: Statistics Canada, 2006 Census, 2011 NHS and Labour Force Survey. (City of Toronto staff calculated culture sector jobs based on NAICS codes adjusted for net in-out commute, work at home employment and no usual place of work employment).

Many culture sector jobs and activities in Toronto rely on the availability of cultural spaces. The following maps show spaces available for cultural use, either owned/operated by the City or by others. These include permanent cultural facilities as well as schools, community centres and other spaces available on a rental basis for cultural use, including performances, exhibitions, visual arts, screen-based performances, and heritage events. The maps show that non-City owned or operated spaces are particularly concentrated downtown while City spaces are more distributed. However, many neighbourhoods show limited cultural spaces of either kind.

Culture Spaces across Toronto

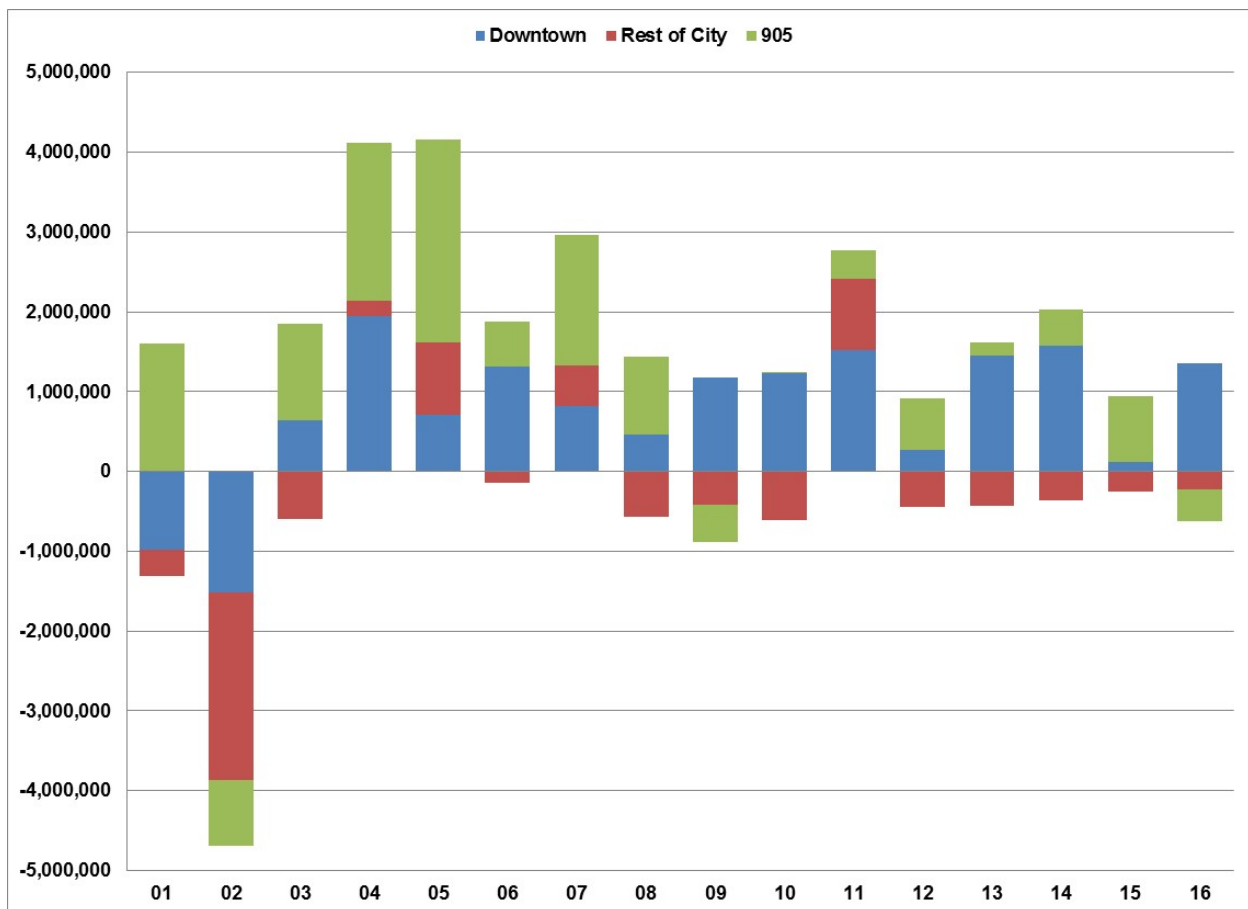


Source: City of Toronto Economic Development and Culture Division maps sourced from City of Toronto Open Data Portal

Industrial, Commercial and Residential Development

Trends of sector specialization are related to changing demand for office space, particularly in and around the downtown core. Fifteen years ago, the city's value of commercial and industrial (C&I) building permits accounted for one quarter of the region's value. In 2016 Toronto represented more than half of the regional total (\$2.6 billion in C&I permit value compared to \$2.1 billion in the 905). As shown in the chart below, this shift can be primarily attributed to demand for office space downtown as new development in other parts of the city has grown much more slowly.

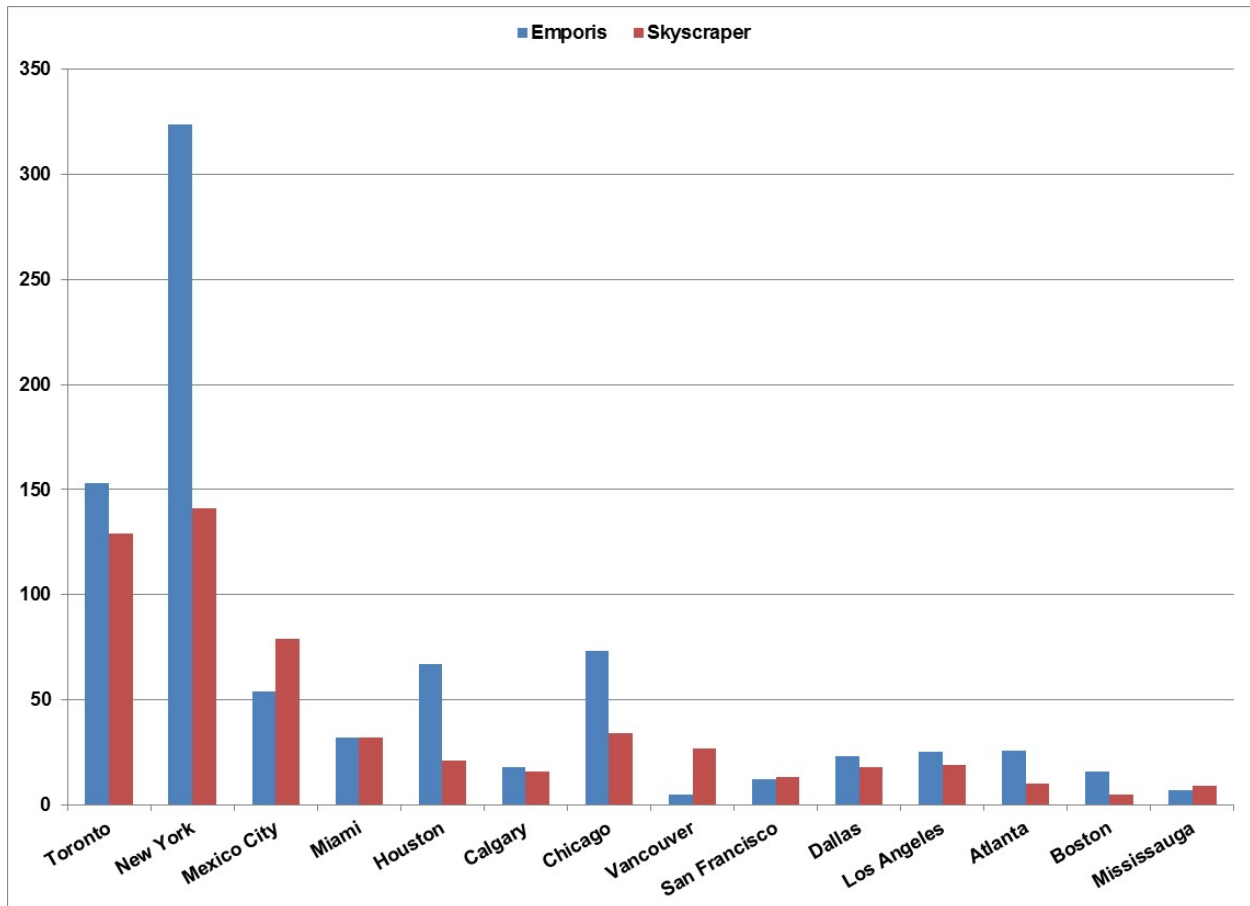
Annual Change in Occupied Office Space (ft²) 2001-2016



Source: Cushman and Wakefield

New office space in the downtown core has among the highest rents in the region, so demand for this space is driven by companies for whom the attraction of talent and the presence of amenities are the primary concern. Downtown provides a variety of cultural and transit opportunities, among other amenities, that attract residents and workers. Toronto now has the second highest number of tall building under construction in North America, behind only New York, led by residential condominiums and a smaller number of office buildings.

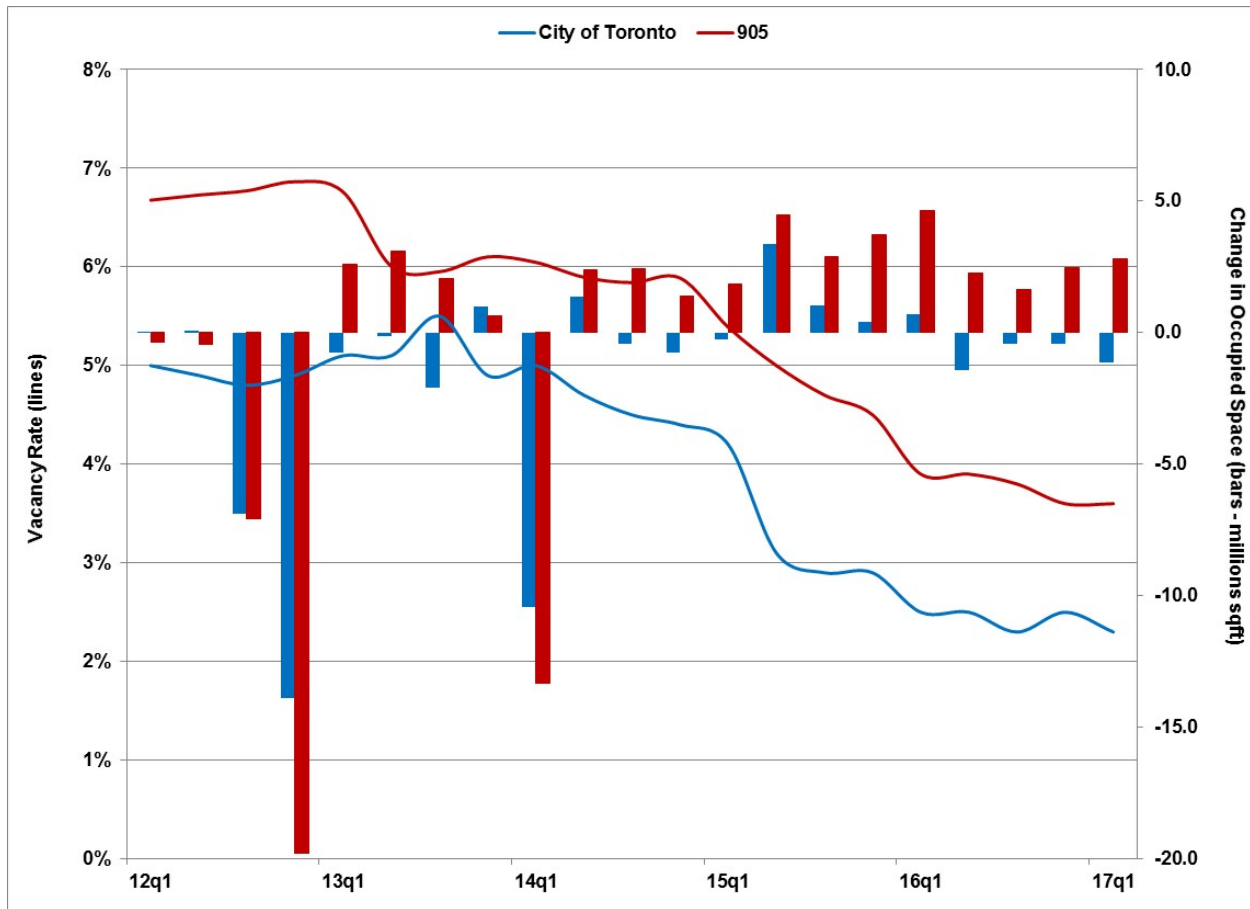
Number of High-Rise Buildings under Construction – North American Cities



Source: Emporis.com and Skyscraperpage.com (June 2017)

Development of industrial space has been much slower. Approximately one third of the total industrial space in the GTA is in Toronto, a ratio that has remained relatively constant. However, while total industrial space has not increased significantly, the vacancy rate for this space has been declining. Most Toronto industrial space is in employment areas outside the city core.

Industrial Vacancy Rate and Occupied Space



Source: Cushman and Wakefield

Data for EDC Divisional Strategy Proposed Lenses

The various trends illustrated by the data presented in this appendix have helped inform the selection of proposed lenses in the attached Conversation Guide. A new EDC Divisional Strategy will respond to various economic and cultural opportunities and challenges, several of which have been identified through ongoing tracking of available data.

The following section provides a brief explanation of how the data presented here supports each of the proposed lenses and if through consultation these lenses are adopted, what type of data could be tracked to show impact and influence policy development. Products from the 2016 Canadian Census will soon be available and will provide a very valuable new data source.

Creativity and Technology

The opportunity to apply a creativity and technology lens to the development of a new EDC strategy is informed by some clear data trends. In particular, the industrial mix in Toronto and the educational attainment of the city's labour force suggest that the local economy is poised to thrive in a variety of innovative sectors.

Toronto is also home to the largest community of artists in the country and the culture sector represents approximately ten percent of all jobs in the city.

Moving forward, several indicators of the impact of EDC support for creativity and technology could be tracked. Depending on data availability, these include:

- The number and type of Toronto-based firms conducting research and development and investing in product or process design.
- The number and growth rate of Toronto-based start-up firms in different sectors.
- Ongoing monitoring of occupation and industry data that shows what type of work is happening at Toronto establishments and how this is changing over time.
- Labour force characteristics for artists including income levels and commuting patterns.
- Participation and attendance at arts and culture events.

Inclusion and Inequality

While a trend towards specialization in certain sectors is occurring and is associated with higher levels of education and higher pay, trends towards more inequality are also clear in the preceding data analysis.

As shown in the labour force section for example, part-time employment is increasing much more rapidly than full-time employment while temporary jobs and self-employment account for a growing percentage of total jobs. Although incomes in certain sectors and occupations are high and rising, many jobs are relatively low-paid and the median income in Toronto is not keeping pace with the mean. The charts above show that youth and recent newcomers are much more likely to be unemployed than the rest of the labour force. And the continued net out-migration of people from Toronto to the rest of the province suggests that rising costs of living are an additional barrier.

Applying an inequality and inclusion lens to EDC's strategy development would involve ongoing measurement of relevant available data which could include:

- Household incomes in different parts of the city.
- Wages (mean and median) in different occupations and industries.
- Labour force variables including unemployment rates and full-time, part-time splits for different demographic groups.
- Measures of income inequality including Gini coefficients.

Toronto's Global Connections

Toronto economic and cultural connections to the rest of the world occur primarily through exports by Toronto-based firms and international tourism. To monitor Toronto's international presence, metrics could include:

- Exports of goods and services by Toronto-based firms of different sizes to different markets
- Overall international tourism figures and estimates of international tourist attendance at cultural events.

Toronto's Local Foundations

The industrial, commercial and residential development section above shows that the majority of new office development and employment growth in Toronto is occurring in or close to downtown. Many of the city's cultural institutions and venues are also located in or close to the core. Applying a local lens to EDC's new strategy development would involve a focus on economic development and culture in all areas of Toronto, alongside a thriving core.

Measuring the impact of this geographic focus is likely to involve mapping of different variables which could include:

- Culture venues and organizations across the city
- Employment growth in different neighbourhoods and employment areas
- Sector concentrations or 'clusters' in different parts of the city
- Changes in employment and other labour force measures following infrastructure investments like new transit lines in different parts of the city.